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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,794	11/19/2003	John James Daniels	1084-0002	6787
7590 12/14/2006 Michaud-Duffy Group LLP 306 Industrial Park Road, Suite 206 Middletown, CT 06457			EXAMINER LIN, JAMES	
			ART UNIT	PAPER NUMBER

1762

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,794

Applicant(s)

DANIELS, JOHN JAMES

Examiner

Jimmy Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 8, 9 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8, 9 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 8-9, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rorison et al. (GB 2344691 A) in view of Krohn et al. (2003/0022957).

Rorison discloses a method of making a polarized EL device, wherein the light active materials can be cross-linked (pg. 16, 1st full paragraph). The polarization of the light active materials can be done by selectively fixing the fluid matrix with a UV light (pg. 12, 2nd and 3rd full paragraphs).

Rorison does not explicitly teach cross-linking a monomer from a mixture containing the monomer and the light active material. However, it is well known in the EL art to use a mixture of a monomer and a light active material in the process of making a cross-linked EL layer (see e.g., Krohn, [0190]-[0193]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to cross-link the monomer from a mixture containing a monomer and a light active material because such a mixture is suitable for the process of making a cross-linked EL layer.

Upon polymerization, the EL composition will comprise of concentration regions (i.e., first regions) containing the light active material and concentration regions (i.e., second regions)

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containing the polymer because neither Rorison nor Krohn teach that the materials chemically react before or after curing.

Claim 2: Rorison teaches that the light active material 22 is disposed between a cathode layer 23 and an anode layer 21 (pg. 8, paragraph 4).

Claim 3: Rorison teaches that the EL device can have an organic emitter layer (pg. 1, paragraph 2).

Claim 8: Rorison teaches that PPV is a suitable light active material (pg. 10, paragraph 2). The present specification exemplifies PPV as a suitable conjugated EL polymer (pg. 99, lines 10-15).

Claim 9: Rorison teaches that the light active layer 54 and a bottom electrode 52 are deposited over a substrate 51 (Fig. 9f).

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rorison et al. '691 in view of Krohn '957 as applied to claim 18, and further in view of Song (U.S. Publication 2001/0050746).

Rorison and Krohn are discussed above. Rorison teaches that an electric field or a magnetic field is applied to the light active material in order to align the molecules (pg. 12, 2nd full paragraph), but does not explicitly teach using the patterned electrodes to define the aligning field. However, the Examiner takes Official Notice that it is well known in the art of display devices that an electric field can be applied using electrodes to align molecules between the electrodes (see, e.g., Song, [0004]). The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have applied an electric field using the patterned electrodes of Rorison and Krohn to have aligned at least one of the light active layers with a reasonable expectation of success because it is well known in the art of display devices that creating an electric field with the display electrodes is suitable for aligning molecules between the electrodes.

Response to Arguments

5. Applicant's arguments, see pgs. 6-7, filed 10/18/06, with respect to claims 1-3 and 9 as rejected over Krohn '957 and claim 8 as rejected over Krohn and Andersson '567 have been fully considered and are persuasive. The rejection of the claims has been withdrawn.

6. Applicant's arguments filed 10/18/06 have been fully considered but they are not persuasive.

Claims 1-3, 8-9, and 18 as rejected over Rorison '691 and Krohn '957:

The Applicant argues that Rorison does not disclose selective cross-linking that yields different regions of concentration of light active material and polymer as recited in claim 1. However, neither Rorison nor Krohn teaches that the polymer and light active material chemically react either before or after the UV curing takes place. Thus, upon the selective cross-linking of Rorison, the polymerized EL portion would contain the light active material in a matrix of polymer material. The matrix of polymer material would necessarily have portions that contain light active material and portions that lack light active material. The portions containing the light active material has been interpreted to be a concentration of the light active material at the first region while the portions lacking the light active material has been interpreted to be a concentration of polymer at the second region.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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KEITH HENDRICKS
PRIMARY EXAMINER